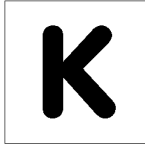**k:** *Abbreviation for* **kilo** (SI prefix for 10^3). *See* **metric system.**

K: **1.** *Abbreviation for* **kelvin(s).** *See* **thermodynamic temperature.** **2.** When referring to data storage capacity, 2^{10}, or 1024 in decimal notation; however this usage of an upper case K is deprecated.

Kalman filter: A computational algorithm that processes measurements to deduce an optimum estimate of the past, present, or future state of a linear system by using a time sequence of measurements of the system behavior, plus a statistical model that characterizes the system and measurement errors, plus initial condition information.

KDC: *Abbreviation for* **key distribution center.**

kelvin (K): A unit of thermodynamic temperature, taken as one of the base units of the International System of Units (SI). The kelvin is defined by setting the thermodynamic temperature of the triple point of water at 273.16 K. *Note 1:* The kelvin was formerly called *"degree Kelvin."* The term *"degree Kelvin"* is now obsolete. No degree symbol is written with K, the symbol for kelvin(s). *Note 2:* In measuring temperature intervals, the degree Celsius is equal to the kelvin. The Celsius temperature scale is defined by setting 0 °C equal to 273.16 K.

kelvin temperature scale: *See* **thermodynamic temperature.**

Kendall effect: A spurious pattern or other distortion in a facsimile record copy caused by unwanted modulation products arising from the transmission of a carrier signal, and appearing in the form of a rectified baseband that interferes with the lower sideband of the carrier. (188) *Note:* The Kendall effect occurs principally when the single-sideband width is greater than half of the facsimile carrier frequency.

Kennelly-Heaviside layer: *Synonym* **E region.**

kernel: A module of a program that forms a logical entity or performs a unit function. *Note:* The most vulnerable portion of code in a secure operating system is a special case of a kernel.

Kerr electro-optic effect: The creation of birefringence in a liquid that is not otherwise birefringent, by subjecting the liquid to an electric field. *Note 1:* The degree of birefringence, which is manifested as a difference in refractive indices for light of orthogonal linear polarizations, one of which is parallel to the induced optical axis, is directly proportional to the square of the applied electric field strength. *Note 2:* In the general case, the birefringence produced by the applied electric field can be used in conjunction with polarizers to modulate light. Devices that use this principle are called *Kerr cells.*

key: Information (usually a sequence of random or pseudorandom binary digits) used initially to set up and periodically change the operations performed in crypto-equipment for the purpose of encrypting or decrypting electronic signals, for determining electronic counter-countermeasures patterns (*e.g.*, frequency hopping or spread spectrum), or for producing other key. *Note:* *"Key"* has replaced the terms *"variable," "key(ing) variable,"* and *"crypto-variable."* [NIS]

keyboard: An input device used to enter data by manual depression of keys, which causes the generation of the selected code element. (188)

keyboard punch*: Synonym* **keypunch.**

key distribution center (KDC): A COMSEC facility that generates and distributes key in electrical form. (188)

keying: The generating of signals by the interruption or modulation of a steady signal or carrier. (188) *See* **chroma keying.**

keying variable: *Deprecated synonym for* **key.**

key management: [The] Process by which key is generated, stored, protected, transferred, loaded, used, and destroyed. [NIS]

key pulsing: A system of sending telephone calling signals in which the digits are transmitted by operation of a pushbutton key set. (188) *Note:* The type of key pulsing commonly used by users and PBX operators is dual-tone multifrequency signaling. Each pushbutton causes generation of a unique pair of

tones. In military systems, pushbuttons are also provided for additional signals, such as precedence. *Synonym* **pulsing.**

keypunch: A keyboard-actuated punch that punches holes in a data medium. *Synonym* **keyboard punch.**

key set: A multiline or multifunction user terminal device. (188)

key stream: [A] sequence of symbols (or their electrical or mechanical equivalents) produced in a machine or auto-manual cryptosystem to combine with plain text to produce cipher text, control transmission security processes, or produce key. [NIS]

key telephone system (KTS): In a local environment, terminals and equipment that provide immediate access from all terminals to a variety of telephone services without attendant assistance. (188) *Note:* A KTS may interface with the public switched telephone network.

key variable: *Deprecated synonym for* **key.**

k-factor: 1. In tropospheric radio propagation, the ratio of the effective Earth radius to the actual Earth radius. (188) *Note:* The k-factor is approximately 4/3. **2.** In ionospheric radio propagation, a correction factor that (a) is applied in calculations related to curved layers, and (b) is a function of distance and the real height of ionospheric reflection.

kHz: *Abbreviation for* **kilohertz.**

kilohertz (kHz): A unit of frequency denoting one thousand (10^3) Hz.

**kilometer:** A unit of distance corresponding to 1000m.

km: *Abbreviation for* **kilometer.**

knife-edge effect: In electromagnetic wave propagation, a redirection by diffraction of a portion of the incident radiation that strikes a well-defined obstacle such as a mountain range or the edge of a building. (188) *Note:* The knife-edge effect is explained by Huygens' principle, which states that a well-defined obstruction to an electromagnetic wave acts as a secondary source, and creates a new wavefront. This new wavefront propagates into the geometric shadow area of the obstacle.

kT: *See* **noise-power density.**

KTS: *Abbreviation for* **key telephone system.**

K-type patch bay: A patching facility designed for patching and monitoring of balanced digital data circuits that support data rates up to 1 Mb/s. (188)
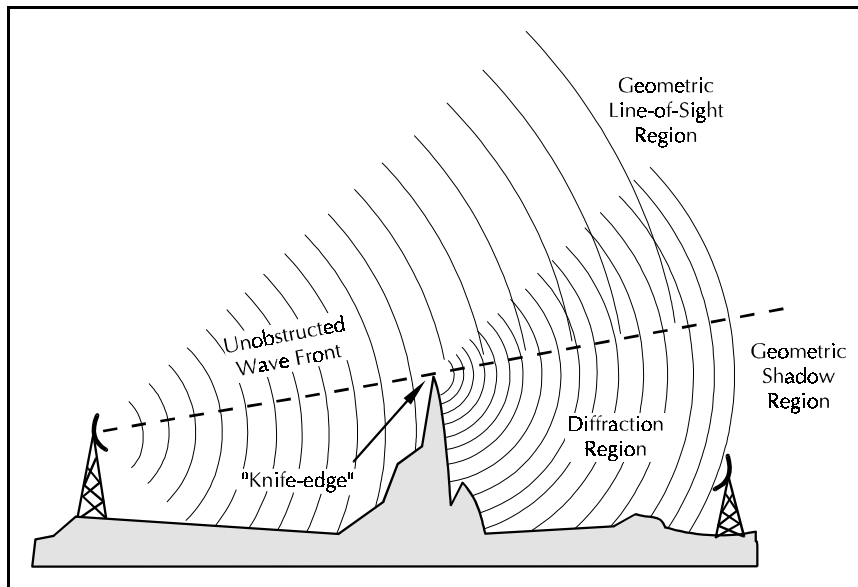
knife-edge effect

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